

DUKE OCCUPATIONAL AND ENVIRONMENTAL SAFETY OFFICE

RESEARCH LABORATORY SAFETY SURVEY

P.I. _____ **Safety Coordinator** _____
Dept. _____ **S.C. Ph #** _____
Box # _____ **S.C. Email** _____
Building _____ **Room(s)** _____

Date ____ / ____ / ____
Auditor _____

| INFORMATIONAL RESOURCES | YES | NO | N/A | COMMENTS |
|---|------------|-----------|------------|--------------------------|
| 1. Can employees demonstrate how to quickly access the following documents? <ul style="list-style-type: none"> • Duke Univ. Safety Manual • Duke Lab Safety Manual • Radiation Safety Manual | | | | List any PHS w/o an SOP: |
| 2. Can employees demonstrate easy access to the following chemical resources? <ul style="list-style-type: none"> • Material Safety Data Sheets • SOP's for each Particularly Hazardous Substance (PHS) | | | | |
| 3. Are copies of the following posted in the laboratory? <ul style="list-style-type: none"> • OESO Emergency Response Guide | | | | |
| 4. Are all employees able to access the Report of Work Related Injury or Illness form ? | | | | |
| 5. Have all employees completed the General Lab Safety Training in the past year? | | | | |

| PPE | YES | NO | N/A | COMMENTS |
|---|------------|-----------|------------|--|
| 1. Personal Protective Equipment (PPE) is made available at no charge to all employees? | | | | |
| 2. Are disposable gloves , in appropriate sizes, available for all workers at risk of exposure for use at their discretion or as required? | | | | |
| 3. Are alternative gloves or liners (i.e., vinyl, nitrile) made available to employees who are allergic to latex or need a more durable glove to reduce chemical permeation? | | | | Type: |
| 4. Is face protection available in any instance when body fluids or hazardous chemicals may be splashed or splattered? | | | | List: |
| 5. Is reusable protective clothing , such as lab coats, aprons, or gowns, being reprocessed by either of the following? <ul style="list-style-type: none"> • Hospital Laundry Services • Outside laundry services (Please provide the name of the service.) | | | | List service: |
| 6. Is respiratory protection (masks, respirators, chemical fume hood) used whenever necessary? | | | | Type: Reason needed: Respirator User Names (send these names to OHS-Nicole or Courtney): |
| 7. Is hearing protection (ear plugs or ear muffs) used whenever necessary? | | | | Explain reason: Noise monitoring needed? |
| 8. Are utility gloves being worn for protection against extreme temperatures? (i.e. liquid nitrogen, -80 ^o freezers, autoclaved items) | | | | |

| GENERAL SAFETY | YES | NO | N/A | COMMENTS |
|--|------------|-----------|------------|-----------------|
| 1. Physical Observations: Is lab free of clutter that may cause trips and falls? Is shelving stable and not overloaded? | | | | |
| 2. Is there machinery which may require machine guards? (Drill press, saw, etc) | | | | |

| BIOLOGICAL SAFETY | YES | NO | N/A | COMMENTS |
|---|------------|-----------|------------|---|
| 1. Are biological materials used in the lab? | | | | List all: |
| 2. Are handwashing sinks with soap available in all areas where exposure to blood/body fluids or any other potentially infectious materials may occur? | | | | |
| 3. Are work surfaces wiped down with an appropriate disinfectant at the end of each procedure or immediately following a spill when potentially infectious material is being manipulated? | | | | List disinfectant: |
| 4. Specimen handling: Are all potentially infectious specimens placed in secondary, leak-proof containers when transported? | | | | |
| 5. Are all non-regulated/non-BBP sharps (i.e. broken glassware, Pasteur pipets) disposed of in an appropriate puncture-resistant container (i.e. glassware boxes)? | | | | |
| <p>If the lab uses human materials or Bloodborne Pathogens (BBP):</p> <p>6a. Are all employees aware of the EOHW Blood and Body Fluid Exposure Hotline?</p> <p>6b. Are sharps substitutes used? (i.e., box cutters instead of unprotected razor blades, plastic aspirators instead of glass Pasteur pipets, etc.)</p> <p>6c. Have employees taken OSHA BBP online training?</p> <p>6d. Do employees know how to access Duke's BBP Control Plan?</p> <p>6e. Hepatitis B vaccine is required to be offered to workers handling materials covered under the BBP standard. Are workers offered this vaccine through EOHW?</p> <p>6f. Are any human cell lines being used for tissue culturing?</p> <p>7. Are flow cytometry facilities used for analyzing or sorting cells?</p> <p>Location:</p> | | | | <p><u>Human Cell Line Source?</u>: Primary (patient) cell line / ATCC / other</p> |
| <p>8a. Does the lab conduct infectious agent-specific training? (i.e., viruses/bacteria) If so, can documentation of training be produced?</p> <p>8b. Are vaccines available for the infectious agent(s) (i.e., vaccinia) being handled? If so, have the workers been offered these vaccines through EOHW?</p> | | | | |
| <p>Regulated Waste:</p> <p>9a. Are solid microbiological wastes (i.e. culture plates) disposed of appropriately?</p> | | | | <p>Check the disposal method:</p> <p><input type="checkbox"/> autoclave: <i>orange bag with Virginia medical waste label attached</i></p> <p><input type="checkbox"/> collected by Environmental Services: <i>Red bag for incineration</i></p> |

| BIOLOGICAL SAFETY (Cont.) | YES | NO | N/A | COMMENTS |
|--|------------|-----------|------------|--|
| 9b. Are sharps (needles, BBP-contaminated glassware) disposed of appropriately? | | | | Check the disposal method: <input type="checkbox"/> autoclave: <i>placed in orange bag with Virginia medical waste label attached</i> <input type="checkbox"/> collected by Environmental Services |
| 9c. Is large tissue waste disposed of appropriately? (i.e., pathological specimens, animal carcasses etc.) | | | | Check the disposal method: <input type="checkbox"/> placed in BFI box and collected by Environmental Services <input type="checkbox"/> placed in leak-proof bag and sent to Vivarium for incineration |
| 9d. Is liquid waste disposed of appropriately? (Aspiration containers NOT overfilled so as to allow waste to flow into the building's central vacuum.) | | | | Check the disposal method: <input type="checkbox"/> specimens placed in a biohazard bag and autoclaved <input type="checkbox"/> specimens placed in BFI box and collected by Environmental Services <input type="checkbox"/> autoclave liquids and pour down sink <input type="checkbox"/> disinfect liquid waste with approved disinfectant and pour down sink |
| 10. Are other solid wastes (gloves, gauze, dressings, etc.) placed in sturdy, plastic bags which are tightly closed for transport? | | | | |
| TB concerns/ Generation of aerosols or sprays: 11a. Does the lab process sputum, bronchial washings, pleural fluid, cultures of <i>M. tuberculosis</i> , or granulomatous tissues that may contain <i>M. tuberculosis</i> ? 11b. Does the lab work with any other infectious agents spread via the aerosol route? (ex. influenza virus) | | | | If yes, explain how potentially aerosolized materials are contained. |
| 12a. Have biological safety cabinets been certified according to Duke Policy? 12b. Do any of the lab's BSCs require formaldehyde decontamination prior to certification? | | | | List last cert. Date: Room:_____ S/N:_____ |
| 13a. Are biohazard warning labels placed on all refrigerators and freezers being used to store potentially infectious materials? 13b. Are doorways labeled with a BSL2 or BSL3 label in rooms where these materials are manipulated? | | | | |
| 14. Are eating, drinking, applying cosmetics, and handling contact lenses prohibited in areas where there is any risk of occupational exposure to potentially infectious materials or hazardous chemicals? | | | | |
| 15. Is storage of food and drink prohibited in appliances used to store potentially infectious materials or hazardous chemicals? | | | | Note any microwaves that need " Not for food use " label. |
| 16. Is the lab shipping any biological materials out through a mail service? | | | | If yes, list the courier service used: If yes, Have personnel been trained in proper shipping procedures? |

| BIOLOGICAL SAFETY (Cont.) | YES | NO | N/A | COMMENTS |
|---|------------|-----------|------------|---|
| 17a. Does the lab work with any viral vector expression systems ? 17b. If yes, has the lab completed a viral vector registration form for each vector? | | | | List viral vectors: List vectors not registered: |
| 18a. Does the lab perform experiments involving the generation of rDNA ? 18b. If yes, has the lab completed the recombinant DNA registration ? | | | | |
| 19. Are there clinical trials involving patient subjects seen in the laboratory or outside of the hospital? Approved through IRB? | | | | |
| 20. Does the lab possess any Select Agents ? | | | | List: |

| CHEMICAL SAFETY | YES | NO | N/A | COMMENTS |
|---|------------|-----------|------------|--|
| 1a. Are hazardous chemicals used? 1b. Can the lab provide an updated chemical inventory? (not a requirement, just a request) | | | | List all PHSs and other commonly used hazardous chemicals: |
| 2. Are PHSs or other irritating powders weighed out? (Please inform OHS of PHS powders not weighed in hood/BSC.) | | | | List: Where weighed? |
| 3a. When procuring chemicals , does the lab select the least hazardous chemical possible for a procedure? 3b. Are lower hazard formulations used if possible (i.e., liquid rather than powder, pre-weighed, small quantities, more dilute)? | | | | |
| 4. Is formaldehyde or paraformaldehyde used? If so, users must take the formaldehyde training, unless they're only working with prefilled (formalin) specimen containers. | | | | List users: Are they designated for training? |
| 5. For situations that call for the transport of chemicals, are secondary leak-proof containers used? | | | | |
| 6. Are all incompatible chemicals appropriately separated during storage to reduce the risk of potential reactivity? | | | | If no, check all that apply: <input type="checkbox"/> Acids not separated from bases <input type="checkbox"/> Oxidizers not separated from organics <input type="checkbox"/> Water-reactives not separated from water sources <input type="checkbox"/> Corrosives stored under sink or in non-corrosion-proof metal cabinet |
| 7. Does the lab have Generator ID barcodes for disposal of regulated chemical waste? | | | | Generator ID: (i.e., SPILL001) |

| | | | | |
|---|--|--|--|--|
| 8. Are all waste chemicals submitted to the OESO for disposal? | | | | List waste not submitted: |
| 9. Are all chemical waste containers properly marked and labeled ? | | | | If no, check all that apply: <input type="checkbox"/> No “waste accumulation” label <input type="checkbox"/> No chemical name or classification <input type="checkbox"/> No “open date” <input type="checkbox"/> No “fill date” |

| CHEMICAL SAFETY (CONT.) | YES | NO | N/A | COMMENTS |
|---|------------|-----------|------------|---|
| 10. When aspirating or venting chemicals using the building’s central vacuum, are cold traps/vacuum protection used to prevent contamination of the central vacuum? | | | | |
| 11. Are proper waste container management practices utilized during storage ? | | | | If no, check all that apply: <input type="checkbox"/> Near incompatibles <input type="checkbox"/> Uncapped (evaporation) <input type="checkbox"/> Improper type of container <input type="checkbox"/> Overfilled container <input type="checkbox"/> No secondary containment <input type="checkbox"/> Visible contamination of outer container |
| 12. Are all filled waste containers removed within 30 days by contacting OESO to request a waste pick-up? | | | | |
| 13. Are unknown chemicals properly labeled as “Waste Unknown”? | | | | |
| 14a. Do all chemical fume hoods have an air flow indicator? 14b. Have all chemical fume hoods been tested in the past year? 14c. Are the chemical fume hoods free of unnecessary clutter? | | | | Room: Last check date: |
| 15. Is the lab familiar with the Mercury Thermometer Exchange Program ? | | | | |
| 16. Is the lab aware of Duke’s Surplus Chemical Exchange ? | | | | |
| 17. Are all chemicals that can form peroxides (Ether, Tetrahydrofuran, Vinyl Chloride, etc.) upon aging, or exposure to air, dated when received? | | | | List: |
| 18. Do all employees know the proper procedures to follow if a chemical spill should occur? | | | | |
| 19. Are all compressed gas tanks secured in an upright position? | | | | |
| 20a. Is there an appropriate emergency eyewash station in every area of the lab where hazardous chemicals are used? 20b. Is the eyewash station tested weekly in all areas where corrosive chemicals are used? | | | | Drench hose, or two pronged eyewash? |
| 21. Is there an emergency drench shower easily accessible in all areas where hazardous materials are manipulated? | | | | |

| FIRE SAFETY | YES | NO | N/A | COMMENTS |
|---|-----|----|-----|---|
| 1a. Are all employees familiar with the location of the following fire safety devices : pull alarm, extinguisher, and fire blanket? 1b. Are these devices unobstructed? | | | | |
| 2. Are open flames/Bunsen burners used inside a BSC/fume hood? 2b. If open flames/Bunsen burners are used on the open bench , is the area kept free of combustible materials (paper, etc.)? | | | | |
| 3a. Have all lab use refrigerators/ freezers been labeled as “Approved” or “Not Approved” for flammable storage by the Fire Safety Division? 3b. Does the lab avoid storing flammable chemicals in a “Not Approved” appliance? | | | | |
| 4. Is there always less than 10 gallons of flammable liquids outside of an approved flammable storage cabinet? | | | | |
| 5. Is there an adequate ceiling clearance throughout the lab? | | | | |
| 6. Is all wiring in the lab in good condition (i.e., no damaged cords, etc.)? | | | | |
| 7. Is there a written evacuation plan available that outlines the appropriate employee evacuation routes? | | | | Fire Safety is aware of this deficiency |

| ANIMALS | YES | NO | N/A | COMMENTS |
|---|-----|----|-----|--|
| 1. Are animals used in the lab? | | | | List all: <input type="checkbox"/> check if Macaques are used <input type="checkbox"/> check if sheep or goats are used |
| 2. Is an appropriate animal transport protocol being utilized? | | | | |
| 3. Is an IACUC approved housing protocol being followed? | | | | |
| 4. Are animals housed overnight in the laboratory? | | | | Requires IACUC approval! |
| 5a. Are hazardous materials administered to the animals? 5b. Are approved SOP's available? | | | | List all: <input type="checkbox"/> Biohazard SOP <input type="checkbox"/> Toxic chemical SOP <input type="checkbox"/> Radioactive material SOP |
| 6. Are anesthetics used? | | | | List all: If anesthetic gases are used, are they captured or released into the lab? (circle) If halothane is used, recommend switching to isoflurane. If ether is used, recommend switching to a different anesthetic. |
| 7a. Are any DEA-controlled drugs used in your animal research? If yes, are drugs stored appropriately (behind two locks/ secured cabinet/ record log/ entries initialed)? 7b. Are expired drugs disposed of properly (returned to DLAR)? | | | | Circle drugs used: Anabolic steroids Meperidine Buprenorphine Morphine Chorazapete Oxymorphone Diazepam Pentazocine Fentanyl Phenobarbital Ketamine Tiletamine & Zoazepam Under whose DEA license is the controlled drug maintained? DLAR or Personal |
| 8. Are carcass disposal methods appropriate? | | | | |
| 9. Are all animal-care personnel enrolled in EOHW program ? | | | | |
| 10a. Have all personnel experiencing symptoms of animal allergies followed-up with EOHW? 10b. Is the lab familiar with the " voluntary respirator use " policy? If employees are using respirators, are they being tracked by OHS? | | | | List employees using respirators because of animal allergies: |
| 11. Are proper restraint techniques used when needed? | | | | <input type="checkbox"/> <u>Brief restraint</u> only (for injections, blood draws, etc.) <input type="checkbox"/> <u>Prolonged restraint</u> **MUST be approved by the IACUC!! |